

## CLAIMS

What is claimed is:

1. A pharmaceutically acceptable anthelmintic formulation comprising a combination of a first active ingredient comprising an avermectin; a second active ingredient comprising a tetrahydropyrimidine; a third active ingredient, comprising a hexahydropyrazinoisoquinoline and a fourth active ingredient comprising a benzimidazole or a probenzimidazole.
2. The formulation of claim 1, wherein the first active ingredient comprises ivermectin.
3. The formulation of claim 1, comprising at least about 0.005% ivermectin.
4. The formulation of claim 1, comprising about 0.012 – 5% ivermectin.
5. The formulation of claim 1, comprising an anthelmintic pyrimidine.
6. The formulation of claim 1, wherein the second active ingredient comprises a pyrantel.
7. The formulation of claim 6, wherein the pyrantel comprises pyrantel pamoate.
8. The formulation of claim 1, comprising at least about 1.5% pyrantel.
9. The formulation of claim 1, comprising about 11.2 – 33% pyrantel.
10. The formulation of claim 1, wherein the third active ingredient comprises praziquantel.
11. The formulation of claim 1, comprising at least about 2.0% praziquantel.
12. The formulation of claim 1, comprising about 8.2 – 23% praziquantel.
13. The formulation of claim 1, comprising at least about 25.3% fenbendazole.
14. The formulation of claim 1, comprising about 30.0 – 45.0% fenbendazole.
15. The formulation of claim 1, comprising at least about 15.2% febantel.
16. The formulation of claim 1, comprising about 19.4 – 31.6% febantel.

17. The formulation of claim 2, in a form that will remain stable and pharmaceutically active, in a solid form, for over one month.

18. The formulation of claim 17, wherein there is an effective amount of pharmaceutically acceptable carrier material to prevent the ivermectin from degrading sufficiently to eliminate its pharmaceutical effectiveness.

19. An anthelmintic formulation, which is in the form of a tablet, comprising an avermectin; a tetrahydropyrimidine; a hexahydropyrazinoisoquinoline; a benzimidazole or a probenzimidazole and a suitable carrier, in a condition that will remain active and in its tablet form for over one month.

20. The formulation of claim 19, comprising ivermectin that has been granulated with carrier material surrounding the ivermectin.

21. A method for forming an anthelmintic formulation comprising the steps of:

- (A) preparing a combination of ivermectin and a second material;
- (B) spray granulating the combination to form granules, with the second material covering the ivermectin; and
- (C) combining granules with an additional active ingredient composition.

22. The method of claim 21, wherein the additional ingredient composition comprises pyrantel pamoate, praziquantel and fenbendazole or febantel.

23. The method of claim 21, wherein the formulation is pressed into a tablet or enclosed in a capsule and the ivermectin has been effectively isolated, so that the formulation will stay stable for over one month.

24. An anthelmintic formulation, which is formed by the method of claim 21.

25. A method of controlling helminth infestation in animals, comprising administering a pharmaceutically effective amount of the formulation of claim 2 to an animal in need thereof.

26. The method claim 25, wherein the animal is a dog or cat.

27. The method claim 25, wherein the administration comprises administering 5 –7  $\mu\text{g/Kg}$  body weight of the animal dog or cat.